

INK, INK-JET HEAD, PRINTER, AND WIRING BOARD

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Abstract of JP10204350

PROBLEM TO BE SOLVED: To easily form various fine wiring patterns and, as a result, shorten the lead time for production of a wiring board, by printing through discharging an ink containing metal particles having a sulfur compound adsorbed thereon using an ink-jet head composed of a cavity, a pressurizing device capable of causing a volume change of the cavity and a nozzle for discharging ink droplets. **SOLUTION:** Here, sulfur compound means a compound having one or more thiol functional groups or a disulfide compound. Such a sulfur compound is chemically adsorbed on the surface of metal particles when it is contacted with such particles in a solution or in a gaseous form, resulting in forming a monomolecular film having a structure similar to a two dimensional crystal. Through the use of this property of such a sulfur compound, an ink containing metal particles having a sulfur compound adsorbed thereon is discharged on a substrate by means of an ink-jet head to thereby form a fine wiring pattern. A low viscous ink which can be discharged by an ink-jet head is prepared by introducing a hydrophilic or hydrophobic group to the sulfur compound on the side opposite to a thiol group to impart hydrophilic or hydrophobic property and choosing an appropriate solvent.

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